

NEW GENERA AND SPECIES OF FISHES.

BY J. DOUGLAS OGILBY.

TACHISURINÆ.

CINETODUS, gen.nov.

Head somewhat depressed, wider than deep, the upper profile linear and moderately oblique. Mouth small and crescentic, the upper jaw slightly projecting; lips thin, without posterior lobe; no preorbital cavity. Jaws with broad bands of small, conical, acute teeth; palatines anteriorly with a patch of similar teeth implanted upon a movable cushion; no vomerine nor posterior palatine patches. Barbels six, two maxillary and four mental, the former of moderate length and slender. Eyes small and lateral. Gill-openings restricted, narrower than the isthmus; gill-membranes partially united, broadly attached to the isthmus; five branchiostegals; gill-rakers short, stout, few in number. Axillary pore present. Dorsal fin inserted above the interspace between the pectorals and ventrals; adipose fin moderate, opposite to the anal. Occiput rounded; nuchal crest conspicuous. Occipital fontanelle narrower and much shorter than the inter-orbital; supraorbital fontanelle present; otic fonticle small and circular.

Etymology:—*κινῆτος*, movable; *ὀδόνς*, tooth.

Type:—*Arius froggatti*, Ramsay & Ogilby.

Distribution:—Rivers of southern New Guinea.

NEDYSTOMA, gen.nov.

Head scarcely depressed, but little wider than deep, the nuchal region not elevated. Mouth moderate and transverse, the upper jaw slightly projecting; lips thin, without lobe. Jaws with two series of feeble, somewhat deciduous teeth; vomer and palatines toothless. Barbels six, two maxillary and four mental, all short

and slender. Eyes rather large, lateral, high. Gill-openings rather wide, much wider than the isthmus; gill-membranes united, attached to the isthmus along the median line, the free margin interrupted; six branchiostegals; gill-rakers short, stout, compressed, remiform, rather numerous. Axillary pore present. Dorsal fin originating midway between the pectorals and ventrals; adipose fin moderate, entirely above the anal. Occiput rounded; nuchal crest rather feeble. Occipital fontanelle dilated and sub-circular, much shorter than the interorbital; a large supraorbital fontanelle; otic fonticle slit-like.

E t y m o l o g y :—*νηδύς*, womb; *στόμα*, mouth.

T y p e :—*Hemipimelodus dayi*, Ramsay & Ogilby.

D i s t r i b u t i o n :—Rivers of southern New Guinea.

PACHYULA, gen. nov.

Head depressed anteriorly, wider than deep, the nuchal region elevated. Mouth small and transverse, the upper jaw well projecting and somewhat gibbous anteriorly; lips thick, the upper terminating in a broad free lobe. Jaws with bands of villiform teeth, that of the premaxillaries wide and transversely divided by a naked groove, behind which the teeth are smaller and decumbent; mandibular band narrow; vomer and palatines toothless. Barbels six, two maxillary and four mental, the former short and slender. Eyes very small, supero-lateral. Gill-openings somewhat restricted, wider than the isthmus; gill-membranes united, attached to the isthmus along the median line, leaving a narrow margin free; five branchiostegals; gill-rakers small, conical, in moderate number. Axillary pore present. Dorsal fin originating much nearer to the pectorals than to the ventrals; adipose fin rather long and low, originating well in advance of the anal. Occiput feebly and obtusely ridged; nuchal crest prominent. Occipital fontanelle dilated and cordiform, shorter than the interorbital; a large supraorbital fontanelle; otic fonticle replaced by an angular sulcus.

E t y m o l o g y :—*παχύς*, thick; *ὄντα*, gums.

T y p e :—*Hemipimelodus crassilabris*, Ramsay & Ogilby.

D i s t r i b u t i o n :—Rivers of southern New Guinea.

ARIUS MASTERSI, sp.nov.

Arius gagorides (not Cuvier & Valenciennes) Macleay, Proc. Linn. Soc. N.S. Wales, vi. 1881, p. 213, Port Darwin.

D. i 7, 0. A. 17.

Depth of body 5, length of head $3\frac{4}{5}$ in the total length; width of head $\frac{5}{6}$ of its length. Eye with superiorly adnate lid, its diameter $6\frac{1}{2}$ in the length of the head and $2\frac{1}{2}$ in that of the snout, which is subtruncate and $\frac{1}{2}$ wider than long. Interorbital region gently rounded, its width $\frac{3}{4}$ of that of the mouth and $\frac{2}{5}$ of the length of the head. Premaxillary teeth in a wide continuous band, which is slightly emarginate behind and obliquely truncated at the extremities, the width of each half rather more than a third of its length; mandibular band slightly tapering distally; vomerine and palatine teeth in three patches on each side, the vomerine and anterior palatine patches confluent, the former being together much longer than either of the latter; posterior patches oval, narrowly separated from the anterior, the least space between them as wide as one of the patches. Maxillary barbel subequal in length to the head, extending to the middle of or slightly beyond the humeral process; postmental barbel $\frac{3}{4}$ to $\frac{3}{5}$ of the maxillary, inserted somewhat behind and outside the mental, which reaches a little beyond the gill-opening. Cranial shield evenly and coarsely granular, the granulation extending well forward on the snout and downward on the sides to the level of the gill-opening; the granules are arranged in several regular series behind the occipital groove and on either side of the fontanelle. Nuchal shield coarsely and evenly granular, its basal width equal to its length which is $\frac{1}{3}$ of its distance from the tip of the snout; outer border strongly convex posteriorly, hinder emarginate; dorsal plate rather large, saddle-shaped, its median length $2\frac{3}{4}$ in that of the nuchal shield, from which it is separated by a narrow naked interspace. Interorbital fontanelle small; occipital reduced to a groove, which is half as long as its distance from the nuchal shield. Opercles smooth, truncated inferiorly. Humeral process granular and triangular, extending along the

proximal $\frac{2}{7}$ of the pectoral spine. Gill-membranes meeting at a very obtuse angle; width of isthmus about $\frac{1}{4}$ of the gill-slit; gill-rakers 5 + 8, the longest rather more than $\frac{1}{2}$ of the diameter of the eye. Distance of dorsal fin from tip of snout $2\frac{4}{5}$ in the total length; dorsal spine granular in front, feebly serrated behind, the sides coarsely striated, its length $\frac{5}{7}$ of that of the head; adipose fin longer than high, as long as the dorsal, its distance from which is $3\frac{1}{8}$ in the total length: anal fin emarginate, higher than long, its length $\frac{5}{9}$ of the head: ventral rounded, $\frac{3}{5}$ of the head, and not quite reaching to the anal: pectoral with 10 soft rays, the spine strong, similar to that of the dorsal, and $\frac{3}{4}$ of the head: upper caudal lobe much longer than the head, $3\frac{1}{3}$ in the total length; least depth of caudal peduncle $2\frac{1}{5}$ in its length behind the adipose fin. Axillary pore minute. Vent midway between the ventrals and anal.

Silvery, the back strongly washed with blue.

Ety m o l o g y:—Named for Mr. George Masters, Curator of the Macleay Museum, Sydney University, to whom I am indebted for much valuable information on the fine collection under his charge, and whose general knowledge of the Australian fauna is possibly exceeded by none.

Type in the University Museum.

Total length 255 millimeters.

Distribution:—Northern Australia.

From *Arius thalassinus*, the only other oriental Tachisurid which possesses three distinct groups of teeth on each side of the roof of the mouth, *A. mastersi* differs in having a smaller eye, larger mouth, wider patch of vomerine teeth, smaller, more widely separated, oval patches of posterior palatines, longer maxillary barbels, coarsely granular head-shields, shorter and broader nuchal shield, larger saddle-shaped dorsal plate, granular humeral process, coarsely striated dorsal spine, larger adipose fin, &c.

In outward appearance this species approaches more closely to *Hexanematichthys sagor* than to any other, but the presence of distinct posterior palatine patches of teeth at once distinguishes it therefrom, while—as compared with a Burmese example of

sagor in the Australian Museum (Day collection)—the head is smaller, eye larger, barbels shorter, opercles and anterior portion of the lateral line smooth, adipose fin larger, &c.

The resemblance to *Arius sona* (= *gagorides*) is superficial.

In restricting the generic name *Arius* to *grandicassis* and its allies, I am keenly aware that I am acting in opposition to the published opinions of such high authorities as Drs. Jordan, Gill, Eigenmann, and others; nevertheless, *grandicassis* being the first species described by Valenciennes under the new generic name *Arius*, and no other species having been categorically proposed by that author as the type, I fail to perceive by what right Dr. Bleeker could arbitrarily select from among the remaining species included in the genus by its original founder any other type; and the fact that in place of a South American villiform-toothed fish, Dr. Bleeker selected an East Indian granular-toothed species, belonging to Lacépède's earlier genus *Tachisurus*, as his type, is an additional and most potent reason why Dr. Bleeker's arbitrary action should be disregarded, and the name *Arius*, instead of being reduced to a synonym of *Tachisurus*, should be allowed to remain in undisturbed possession of those species having villiform palatine teeth with a backward projection along the inner margin of the bone, to which the names *Netuma* and *Notarius* have been given by Drs. Bleeker and Gill respectively.

MYCTOPHIDÆ.

ÆTHOPRORA PERSPICILLATA.

D. iii 14. A. ii 13. Sc. 36.

Depth of body $4\frac{1}{3}$, length of head $3\frac{1}{2}$ in the total length; depth of head $\frac{3}{4}$ of its length. Snout very short, obtuse, and declivous, vertically divided into two portions by a delicate scale-like ridge. Luminous organ large, covering the entire front of the snout but separated from the eye by a conspicuous interspace, its posterior lobe prolonged backwards beyond the front margin of the eye and scarcely separated from its antero-inferior angle; a smaller,

circular, photophore between the upper portion of the anteorbital photophore and the antero-superior angle of the eye on either side, but separated from both by a narrow interspace. Cleft of mouth oblique and slightly curved, the maxillary nearly reaching to the angle of the preopercle. Eye large, with well developed adipose lid, its diameter $\frac{3}{8}$ of the length of the head. Interorbital region convex, its width rather more than the diameter of the eye; the supraorbital bone forming an acute overhanging ridge. Opercle notched posteriorly, its lower portion the longer, but not produced backwards so far as the acute subopercle. Origin of the dorsal slightly in advance of the vertical from that of the ventral, which is directly below the base of the first articulated ray, which is the highest, a little longer than the base of the fin and $\frac{3}{4}$ of the length of the head; base of last dorsal ray slightly in advance of the origin of the anal: adipose fin narrow, tapering, its length $\frac{2}{3}$ of the diameter of the eye, inserted midway between the dorsal and the base of the caudal and a little behind the vertical from the last anal ray: anal fin shorter and lower than the dorsal, its length $\frac{4}{5}$ of its distance from the caudal: ventral with eight rays, the space between its origin and the tip of the mandible $\frac{2}{3}$ of its distance from the base of the caudal and slightly anterior to a point equidistant from the base of the adipose fin and the front margin of the eye; its length is $\frac{5}{9}$ of that of the head and it does not nearly reach to the anal: pectoral pointed, with eleven rays, scarcely half the length of the head and not quite reaching to the vertical from the origin of the ventral: caudal forked, about $\frac{1}{4}$ of the total length, the least depth of the peduncle $2\frac{1}{3}$ in the depth of the body. Scales smooth, those of the lateral line somewhat enlarged and notched posteriorly, with the tubes very conspicuous; lateral line without anterior curve. In addition to the anteorbital and its supernumerary photophores there are two luminous spots on the opercle, one between the posterior half of the eye and the upper jaw, three on each side of the mandible, and one inside the mouth below the maxillary one; there is also a large luminous spot above the base of the pectoral. The arrangement of the body photophores is as follows—five thoracic,

forming an S-shaped band between the throat and the base of the ventral; one pectoral, on the base of that fin; three anterolaterals, one just inside the tip of the pectoral rays, one a little behind the vertical from the base of the ventral and rather nearer to it than to the lateral line, and the third much lower on the side above the middle of the ventral fin; between the ventrals and the anal the body is badly mutilated, but three are visible the two anterior being well separated, the place of the missing photophore corresponding vertically to that of the third anterolateral; three mediolaterals, the lower pair on nearly the same horizontal plane, the one a little before the other a little behind the vertical from the origin of the anal, the third nearly above the first, on the lateral line; five anal and five postanal, the fourth and fifth in both cases separated by a wide interval; two posterolaterals, the lower corresponding to the anal interval and not much higher on the side than the anal series, the upper close to the lateral line; and two caudal.

Blackish, growing slightly paler on the sides and below; lower jaw grayish-white with a broad blackish crossband below the eye: caudal fin whitish: photophores pearly with a blackish rim.

E t y m o l o g y:—*perspicillata*, spectacled; in reference to the pair of supernumerary photophores in front of the eyes.

T y p e in my possession.

D i s t r i b u t i o n:—A single specimen of this interesting fish was obtained by my collector at Lord Howe Island, having been washed ashore after the recent heavy gale.* It measured 62 millimeters to the end of the middle caudal rays. The specimen is unfortunately badly mutilated, being almost broken in two just behind the termination of the anal fin, and also injured along the ventral surface which is burst open, exposing to view an enormous mass of minute ova. Any shortcomings in the above

* I have to return my best thanks to J. Brodie, Esq., the Visiting Magistrate of the Island, for the interest which he has taken in obtaining specimens of the fishes inhabiting the seas of the Island for me.

description will I trust be pardoned on account of the condition of the specimen.

Three species of *Ethoprora* have already been described, the best known being *E. metopoclampa* (Cocco), which has as yet been captured only in the Mediterranean and of which but eight examples have come under the notice of scientific writers. It has, however, had the advantage of being figured in no less than four different works, and in view of the fact that my species was breeding or just about to breed the following remarks by Drs. Goode and Bean are both interesting and instructive:—"The great extension and elaboration of the nasal luminous plate shown in the figure, may be due to sexual conditions. At all events, as has been remarked, it is unlike that shown by Raffaele, though sufficiently similar to that of Cocco and Bonaparte" (*Oceanic Ichthyology*, p. 87). Care should be taken in describing other species of Pacific *Ethoprora*, not to lay too great stress on a somewhat more restricted development of the anteorbital photophore, where other characters agree with those given above.

The two other species belong to the fauna of the North Atlantic; one of them, *E. effulgens*, is known from two specimens, the first of which was taken from the stomach of a cod, while the second was dredged by the "Albatross" in 1639 fathoms, the remaining species, *E. lucida*, being taken at the same time.

From all three the Pacific fish may be distinguished by the presence of an additional frontal photophore lying between the upper end of the anteorbital and the antero-superior angle of the eye, as well as by the conspicuous non-glandular interspace between the front margin of the eye and the anteorbital photophore, and by the increased number of lateral photophores.

Although this is the first species of *Ethoprora* definitely recorded from the Pacific and Indian Oceans the *Scopelus* mentioned by Dr. Alcock (Ann. & Mag. Nat. Hist. (6) vi. 1890, p. 219) as having been "taken from the stomach of a *Trigla hemisticta*" in the Bay of Bengal, and possessing "a conspicuous luminous organ immediately in front of the eye" may have belonged to this genus.

PLATYCEPHALIDÆ.

THYSANOPHRYS, gen.nov.

Body rather short, stout, and somewhat depressed, covered with moderate rough scales, which are partly ciliated and partly cycloid. Lateral line complete, extending on the caudal fin, the tubes widely bifurcate and occupying the entire length of the scale. Head broad and much depressed, mostly naked. Mouth anterior, with large, slightly oblique cleft, the lower jaw projecting; premaxillaries slightly protractile; maxillary lateral, partly exposed, without supplemental bone. Teeth villiform, in bands on the jaws and palatines, in two subovate patches on the vomer; pterygoids and tongue smooth. Nostrils approximate, the anterior with a tentacle. Eyes superior, close together, the lids with dermal appendages. Angle of preopercle produced and spinigerous; opercle with two widely divergent spines; no subopercular appendage. Branchiostegals seven; gill-rakers short, stout, spinulose, few in number. Two separate dorsal fins, with viii, 12 rays, the second the longer; anal with 11 soft rays, similar to the second dorsal; ventrals large and widely separated, inserted behind the pectorals, with i 5 rays, the fourth the longest; pectorals moderate, rounded, with 20 rays, the upper middle ones the longest; caudal rounded. Posterior processes of the premaxillaries not extending to the frontals; prefrontal and supraorbital bones greatly developed, the former with a strong spine; cranial ridges with strong spines. Vertebrae 27.

Etymology:—*θύσανος*, fringe; *ὄφρῦς*, eyebrow; in allusion to the series of dermal appendages above the eye.

Type:—*Platycephalus cirronasus*, Richardson.

Distribution:—Coast of New South Wales.

Through the kind assistance of Dr. Gregg Wilson I am enabled to give the following more detailed account of the cranial armature of the type:—Prefrontal with a large posteriorly-directed spine; supraorbital crest of frontal prominent and ending in a small spine; behind this another more prominent spine appears on the frontal; sphenotic with a small but distinct spine;

posterior to this and in a line with it is a long ridge ending in a spine on the pterotic; the supraoccipital has a low, irregular, V-shaped ridge in its middle line, and the parietal has a prominent spine just external to this; the epiotic is like a scale on the greatly developed opisthotic, and ends in a sharp point, which does not stand out like a spine; opisthotic greatly produced posteriorly, terminating in a prominent spine.

ATHERINIDÆ.

TÆNIOMEMBRAS, gen.nov.

Body elongate and compressed, the abdomen rounded, covered with moderate, adherent, cycloid scales. Head small, a little deeper than wide, with moderate, pointed snout, partially scaly, the snout, interorbital region, and preopercular border naked and provided with series of large open pores. Mouth terminal, small, with oblique cleft; jaws subequal, with the edges nearly linear. Premaxillaries narrow throughout, protractile, the skin not continuous with that of the forehead; maxillary almost entirely concealed beneath the preorbital, not extending backwards to the eye. Upper jaw with several, lower with a single series of small, conical teeth; palatine teeth uniserial, strong; vomer, pterygoids, and tongue smooth. Eyes lateral, without adipose lid. Six branchiostegals; gill-rakers short and stout. Two widely separated dorsal fins, with vi-viii, i 9-11 rays, the spinous ones flexible anal originating below the dorsal interspace, with i 10-12 rays; ventrals small, well separated, with a feeble spine and 5 soft rays, without intermediate scaly process; pectorals high, with 12-14 rays, the upper the longest; caudal forked, the peduncle slender. Vent situated below the first dorsal. Vertebrae 42.

Etymology:—*ταυίος*, slender; *Membras*, a related genus = *Atherina*.

Type:—*Atherina microstoma*, Günther.

Distribution:—Atherinids from the fresh and brackish waters of Tasmania, allied to *Atherina*, but differing in the more elongate body, pointed snout, small mouth, stronger dentition, shorter, stouter and fewer gill-rakers, &c.